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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,561	10/31/2003	Johnny Zhong	15436.132.1	1109
22913	7590	01/26/2006	EXAMINER	
WORKMAN NYDEGGER (F/K/A WORKMAN NYDEGGER & SEELEY) 60 EAST SOUTH TEMPLE 1000 EAGLE GATE TOWER SALT LAKE CITY, UT 84111			LEPISTO, RYAN A	
			ART UNIT	PAPER NUMBER
			2883	

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary

Application No.

10/698,561

Applicant(s)

ZHONG ET AL

Examiner

Ryan Lepisto

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 9-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/28/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. **Claims 1-4 and 7-8** are rejected under 35 U.S.C. 102(b) as being anticipated by Pelekhaty (US 6,215,592 B1). Pelekhaty teaches a wavelength division multiplexing system (or interleaver as defined by applicant) (Figs. 11 and 13-14) comprising a dual fiber GRIN collimator (284), an optical substrate (part of 282), a thin film portion (282) having a plurality of thin film layer (66, 68) of quarter wavelength thickness (column 5 lines 19-24) and spacers (254, 258, 256, etc) applied to the substrate for allowing certain wavelengths to pass and reflecting other adjacent wavelengths, an input fiber (290) for receiving an optical signal, a reflection fiber (298) for receiving reflected signals from the thin film filter (282), a single fiber GRIM collimator (286) optically coupled to the dual fiber collimator (284) for receiving signals passed by the filter (282), matching layers (196) that may be glass or air (column 5 lines 9-11) that have an index of refraction that creates an efficient interface between the optical substrate (silica, column 11 lines 54-55) since the film may be air (refractive index of 1), and cavities (spacers as described above) having an index of refraction (glass) for matching the dual fiber collimator (which are known to be glass) to the air surrounding (index = 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 5 and 6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Pelekhaty as applied to claims 1-4 and 7-8 above, and further in view of **Tai et al (US 6,341,040 B1)** (Tai).

Pelekhaty teaches the interleaver described above used to reject claims 1-4 and 7-8.

Pelekhaty does not teach expressly 4 to 6 cavities or 72 to 74 thin film layers. Pelekhaty does teach that any number of thin film layers may be used as necessary to achieve a desired reflectivity (column 9 lines 3-9).

Tai teaches 3 to 5 cavity filters (Fig. 12 for example) used in a system (Fig. 2) comprising similar components of the system taught by Pelekhaty, just with a different filter.

Pelekhaty and Tai are analogous art because they are from the same field of endeavor, interleavers comprising a dual fiber collimator, single fiber collimator, thin film filters and fiber (input, passing and reflecting) for multiplexing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to replace the filter taught by Pelekhaty with the one taught by Tai in the system taught by Pelekhaty and to maximize the number of thin films used for the

particular function and system as taught by Pelekhaty since the systems function the same are comprising similar structures.

In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

The motivation for doing so would have been to increase transmission efficiency by adding more cavities and therefore improving reflectivity and transmission (Tai, column 7 lines 23-26, 45-48).

Response to Arguments

3. Applicant's arguments filed 28 December 2005 have been fully considered but they are not persuasive. Applicant argues that Pelekhaty does not teach a dual fiber collimator comprising the multiple components in the claim. As seen in Fig. 14 of the Pelekhaty reference, the substrate and thin film portions (282) and the two fibers (290 and 298) are shown as being abutted with the both ends of the collimator (284). Pelekhaty teaches specifically that the components are "combined" with the collimator (284) (column 12 lines 4-6) and therefore it is apparent that the substrate and thin film portion is combined with the collimator making the collimator and substrate and thin film portions a single identity called a "structure" (280) by Pelekhaty. The manufacturing technique of combining the substrate and thin film portion are not taught, but the fact

that the elements are combined assures that the Pelekhaty reference reads upon a dual fiber collimator comprising a thin film portion and two fibers.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Lepisto whose telephone number is (571) 272-1946. The examiner can normally be reached on M-F 7:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2883

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ryan Lepisto

Art Unit 2883

Date: 1/18/06



Frank Font

Supervisory Patent Examiner

Technology Center 2800